

(4) Another source on mitigation procedures is Ramifications/Mitigation statements from USA-CERL's Environmental Impact Computer System (EICS).⁴

(5) Local interest groups may also be able to help identify potential mitigation measures.

(c) Example mitigation techniques. Several different mitigation techniques have been used on military installations for a number of years. The following examples illustrate the variety of possible measures:

(1) There are maneuver restrictions in areas used extensively for tracked vehicle training. These restrictions are not designed to infringe on the military mission, but rather to reduce the amount of damage to the training area.

(2) Aerial seeding has been done on some installations to reduce erosion problems.

(3) Changing the time and/or frequency of operations has been used. This may involve changing the season of the year, the time of day, or even day of the week for various activities. This avoids noise impacts as well as aesthetic, transportation, and some ecological problems.

(4) Reducing the effects of construction has involved using techniques that keep heavy equipment away from protected trees and quickly reseeded areas after construction.

(d) Mitigation alternatives. Consideration of all practical mitigation alternatives are considered. The emphasis is not on what can be theoretically accomplished, but on what can be accomplished for each alternative.

(1) Practical mitigations are those that the proponent can accomplish with the project's constraints such as manpower and money. Practical measures must be defined at the installation level; what may be practical on one post or at one time may not be practical on another. A number of items determine what is practical, including military mission, manpower restrictions, cost, institutional barriers, technical feasibility, and public acceptance. Practicality does not necessarily ensure resolution of conflicts among these items, rather it is the degree of conflict that determines practicality.

(2) The previous examples involved some amount of conflict in all these areas. Although mission conflicts are inevitable, they are not insurmountable. Therefore, the proponent should be cautious about declaring all mitigations impracticable and should carefully consider any manpower requirements. This may be a greater restriction than military mission conflicts.

(3) There is no standard rule of thumb applicable to mitigation activities. The key

point concerning both the manpower and cost constraints is that unless money is actually budgeted and manpower assigned, the mitigation does not exist. This will require coordination by the proponent office early in the process to allow enough time to get the mitigation activities into the budget cycle. If the mitigation is not funded on schedule with the action, the action can be judicially stopped.

(4) Mitigations that do not fall directly within the definition of practical must still be considered, including those to be accomplished by other agencies. The proponent must coordinate with these agencies so that they can plan to obtain the necessary manpower and funds. Mitigations that were considered but rejected must be discussed, along with the reason for the rejection, within the EIS.

F-3. Monitoring

Monitoring is an integral part of any mitigation system and a way to examine an environmental mitigation. The two basic types of monitoring are as follows:

(a) Enforcement monitoring. Enforcement monitoring ensures that mitigation is being performed as described in the environmental document and ensuring that mitigation requirements and penalty clauses are written into any contracts. It also includes ensuring that these provisions are enforced. Before mitigation can take place on-post, it must be budgeted, scheduled, and the necessary manpower must be assigned. Any changes required in post regulations must be completed and enforced. The actual mitigation (for example, aerial seeding of a training area) must be performed. Enforcement monitoring involves the monitoring of all these activities.

(b) Effectiveness monitoring. Effectiveness monitoring measures the success of the mitigation effort and/or the environmental effect. This must be a scientifically based quantitative investigation. Generally, qualitative measurements are not acceptable. However, it is not necessary to measure everything that may be affected by the action, only enough information to judge the method's effectiveness.

F-4. Establishing a Monitoring System

Establishment of a monitoring system must involve all appropriate offices that will be involved in its implementation. When evaluating several different potential monitoring systems, the ability to perform the monitoring is the most critical factor. This means that manpower—both on post and outside expertise—must be available. Sufficient funds must also be available for the monitoring process. Figures F-1 through F-3 illustrate the steps in establishing a monitoring system. Figure F-1 is designed to help select

⁴L. V. Urban, et al., Computer-aided Environmental Impact Analysis for Construction Activities; User Manual, Technical Report E-50/ADA008988 (USA-CERL, March 1975).

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the type of monitoring system needed. Figure F-2 shows the responsibilities of the lead agency in establishing an enforcement mon-

itoring program. Figure F-3 illustrates the steps necessary to establish an effectiveness monitoring program.